

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for converting the bit rate of a compressed bitstream to use an available bandwidth of a channel, the method comprising:
re-quantizing a first portion of the bitstream that includes a B frame including video data using a first re-quantization scheme; and
re-quantizing a second portion of the bitstream that includes a P frame including video data or an I frame including video data using a second re-quantization scheme that includes full decoding and re-encoding of the second portion.
2. Cancelled.
3. (Previously Presented) The method of claim 1 wherein the first re-quantization scheme includes basic re-quantization.
4. (Currently Amended) The method of claim 1 wherein the compressed bitstream is an MPEG compressed bitstream ~~and the first portion includes a B frame.~~
5. (Original) The method of claim 1 further including determining the available bandwidth of the channel.
6. (Currently Amended) The method of claim 1 wherein the second re-quantization scheme creates a new motion vector for the second portion of the bitstream ~~compressed bitstream is an MPEG compressed bitstream and the second portion includes a P frame.~~
7. (Previously Presented) The method of claim 1 further including changing the resolution of the second portion.
8. (Original) The method of claim 1 wherein the first and second portion each include a frame of the video data.
9. (Cancelled).

10. (Cancelled).
11. (Previously Presented) The method of claim 1 wherein the first portion includes a P frame and the P frame is the last P frame in a group of pictures.
12. (Original) The method of claim 1 wherein the first portion comprises color video data.
13. (Original) The method of claim 1 wherein the second portion comprises brightness video data.
14. (Original) The method of claim 1 wherein the first and second re-quantization schemes are performed in real time.
15. (Original) The method of claim 1 further including monitoring the processing load of a processor in a network device.
16. (Withdrawn) A method for converting the bit rate of a compressed bitstream to use an available bandwidth of a channel, the method comprising: selectively re-quantizing a portion of the bitstream according to one of two re-quantization schemes, the first re-quantization scheme comprising variable length decoding the portion, inverse quantizing the portion, re-quantizing the portion with a different quantization step size and variable length encoding the portion, the second re-quantization scheme comprising motion compensated re-quantization of the portion.
17. (Withdrawn) The method of claim 16 wherein the portion is a frame of the compressed bitstream.
18. (Withdrawn) The method of claim 17 wherein the frame is re-quantized using the first re-quantization scheme when the frame is a B frame and the frame is re-quantized using the second re-quantization scheme when the frame is a P frame.

19. (Withdrawn) The method of claim 17 wherein the frame is re-quantized using the first re-quantization scheme when the frame includes chroma information and the frame is re-quantized using the second re-quantization scheme when includes luma information.
20. (Withdrawn) The method of claim 16 further including performing motion estimation to produce motion vectors for the motion compensated re-quantization.
21. (Withdrawn) A network device for providing compressed video data onto a network, the network device comprising: a re-quantization apparatus that receives a compressed video bitstream having a first bit rate and outputs the compressed video bitstream having a second bit rate, the re-quantization apparatus including a first portion configured to receive a first portion of the compressed video bitstream and output the first portion after re-quantization by a first re-quantization scheme, the re-quantization apparatus including a second portion configured to receive a second portion of the compressed video bitstream and output the second portion after re-quantization by a second re-quantization scheme; and a transmitter configured to transmit the compressed video bitstream having the second bit rate onto the network.
22. (Withdrawn) The network device of claim 21 further including a network interface configured to receive the compressed video bitstream having the first bit rate from the network.
23. (Withdrawn) The network device of claim 21 further including a rate controller coupled to the re-quantization apparatus.
24. (Withdrawn) The network device of claim 21 wherein the first portion of the re-quantization apparatus is included in the second portion of the re-quantization apparatus.
25. (Withdrawn) The network device of claim 21 further including a processor whose processing load at least partially determines which of the first portion and the second portion of the re-quantization apparatus is used.
26. (Currently Amended) A system for converting the bit rate of a compressed bitstream to use an available bandwidth of a channel, the system comprising:

means for re-quantizing a first portion of the bitstream that includes a B frame including video data using a first re-quantization scheme; and

means for re-quantizing a second portion of the bitstream that includes a P frame including video data or an I frame including video data using a second re-quantization scheme that includes full decoding and re-encoding of the second portion.

27. (Previously Presented) The system of claim 26 wherein the means for re-quantizing the first portion is included in the means for re-quantizing the second portion.

28. (Original) The system of claim 26 wherein the means for re-quantizing the first portion includes means for performing basic re-quantization.

29. (Original) The system of claim 26 wherein the means for re-quantizing the second portion includes means for performing motion compensated re-quantization.

30. (Currently Amended) A computer readable medium including instructions for converting the bit rate of a compressed bitstream to use an available bandwidth of a channel, the instructions comprising:

instructions for re-quantizing a first portion of the bitstream that includes a B frame including video data using a first re-quantization scheme; and

instructions for re-quantizing a second portion of the bitstream that includes a P frame including video data or an I frame including video data using a second re-quantization scheme that includes full decoding and re-encoding of the second portion.

31. (Currently Amended) An apparatus for converting the bit rate of a compressed bitstream, the apparatus comprising:

memory,

a processor coupled to memory, the processor configured to re-quantize a first portion of the bitstream that includes a B frame including video data using a first re-quantization scheme and re-quantize a second portion of the bitstream that includes a P frame including video data or an I frame including video data using a second re-quantization scheme that includes full decoding and re-encoding of the second portion.

32. (New) The method of claim 1 wherein the wherein the second re-quantization scheme re-uses a motion vector for the second portion of the bitstream.